

Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 9

Complete if Known

Application Number	09/905,718
Filing Date	May 16, 2002
First Named Inventor	Watts et al.
Group Art Unit	1762
Examiner Name	Bernard D. Pianalto
Attorney Docket Number	PA27/UTS-26-03q12

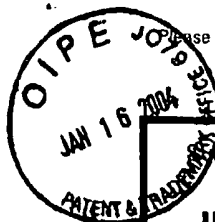
U.S. PATENT DOCUMENTS

Examiner Initials*	Cito No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
BP	A1	3,807,027		Heisler	04-30-1974	
	A2	3,807,029		Troeger	04-30-1974	
	A3	3,811,665		Seelig	05-21-1974	
	A4	4,062,600		Wyse	12-13-1977	
	A5	4,098,001		Watson	07-04-1978	
	A6	4,155,169		Drake et al.	05-22-1979	
	A7	4,202,107		Watson	05-13-1980	
	A8	4,267,212		Sakawaki	05-12-1981	
	A9	4,337,579		De Fazio	07-06-1982	
	A10	4,355,469		Nevins et al.	10-26-1982	
	A11	4,414,750		De Fazio	11-15-1983	
	A12	4,440,804		Milgram	04-03-1984	
	A13	4,451,507		Beltz et al.	05-29-1984	
	A14	4,544,572		Sandvig et al.	10-01-1985	
	A15	4,610,442		Oku et al.	09-09-1986	
	A16	4,694,703		Routson	09-22-1987	
	A17	4,731,155		Napoli et al.	03-15-1988	
	A18	4,763,886		Takei	08-16-1988	
	A19	4,929,083		Brunner	05-29-1990	
	A20	4,959,252		Bonnebat et al.	09-25-1990	
	A21	5,072,126		Progler	12-10-1991	
	A22	5,110,514		Soane	05-05-1992	
	A23	5,126,006		Cronin et al.	06-30-1992	
	A24	5,204,739		Domenicali	04-20-1993	
	A25	5,240,550		Boehnke et al.	08-31-1993	
	A26	5,348,616		Hartman et al.	09-20-1994	
	A27	5,392,123		Marcus et al.	02-21-1995	
	A28	5,425,964		Southwell et al.	06-20-1995	
	A29	5,452,090		Progler et al.	09-19-1995	
	A30	5,480,047		Tanigawa et al.	01-02-1996	
	A31	5,512,131		Kumar et al.	04-30-1996	
	A32	5,515,167		Ledger et al.	05-07-1996	
	A33	5,545,367		Bae et al.	08-13-1996	
	A34	5,566,584		Briganti	10-22-1996	
Examiner Signature	Pianalto				Date Considered	7-29-04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Institute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

9

Complete If Known

Application Number	09/905,718
Filing Date	May 16, 2002
First Named Inventor	Watts et al.
Group Art Unit	1762
Examiner Name	Bernard D. Pinalto
Attorney Docket Number	PA27/UTS-26-03q12

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code* (if known)			
[Handwritten Initials]	A35	5,633,505		Chung et al.	05-27-1997	[Large X]
	A36	5,723,176		Keyworth et al.	03-03-1998	
	A37	5,724,145		Kondo et al.	03-03-1998	
	A38	5,747,102		Smith et al.	05-05-1998	
	A39	5,753,014		Van Rijn	05-19-1998	
	A40	5,760,500		Kondo et al.	06-02-1998	
	A41	5,772,905		Chou	06-30-1998	
	A42	5,776,748		Singhvi et al.	07-07-1998	
	A43	5,779,799		Davis	07-14-1998	
	A44	5,802,914		Fassler et al.	09-08-1998	
	A45	5,804,474		Sakaki et al.	09-08-1998	
	A46	5,877,036		Kawai	03-02-1999	
	A47	5,877,861		Ausschnitt et al.	03-02-1999	
	A48	5,884,292		Baker et al.	03-16-1999	
	A49	5,888,650		Calhoun et al.	03-30-1999	
	A50	5,900,160		Whitesides et al.	05-04-1999	
	A51	5,912,049		Shirley	06-15-1999	
	A52	5,942,871		Lee	08-24-1999	
	A53	5,948,470		Harrison et al.	09-07-1999	
	A54	5,952,127		Yamanaka	09-14-1999	
[Handwritten Initials]	A55	6,038,280		Rossiger et al.	03-14-2000	
	A56	6,039,897		Lochhead et al.	03-21-2000	
	A57	6,046,056		Parce et al.	04-04-2000	
	A58	6,051,345		Huang	04-18-2000	
	A59	6,074,827		Nelson et al.	06-13-2000	
	A60	6,091,485		Li et al.	07-18-2000	
	A61	6,125,183		Jiawook et al.	09-26-2000	
	A62	6,128,085		Buermann et al.	10-03-2000	
	A63	6,143,412		Schueler et al.	11-07-2000	
	A64	6,168,845		Fontana, Jr. et al.	01-02-2001	
[Handwritten Initials]	A65	6,180,239		Whitesides et al.	01-30-2001	
	A66	6,204,922		Chalmers	03-20-2001	
	A67	6,218,316		Marsh	04-17-2001	
	A68	6,234,379		Donges	05-22-2001	
	A69	6,245,213		Olsson et al.	06-12-2001	
	A70	6,334,960		Willson et al.	01-01-2002	

Examiner
Signature

[Handwritten Signature: Pinalto]

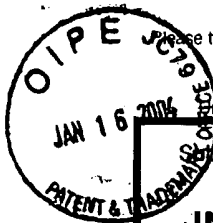
Date
Considered

7-29-04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. *Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



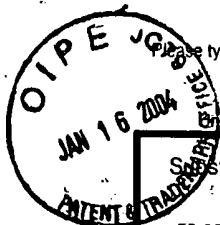
Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	09/905,718
Sheet 3 of 9				Filing Date	May 16, 2002
				First Named Inventor	Watts et al.
				Group Art Unit	1762
				Examiner Name	Bernard D. Pianalto
				Attorney Docket Number	PA27/UTS-26-03q12

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ^o
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
A70	A71	DE	2800476		Lamprecht et al.	07-13-1978		
	A72	EP	244884		Ponjee	03-03-1987		
	A73	JP	1-196749		Matsumoto et al.	08-08-1989		
	A74	WO	92/17883		Olsson	10-15-1992		
	A75	EP	733455		Anderhub et al.	09-25-1996		
	A76	WO	98/10121		Olsson et al.	03-12-1998		
	A77	WO	99/45753		Wikström	09-10-1999		
	A78	DE	19648844		Muller et al.	09-18-1997		
	A79	WO	99/63535		Olsson	12-09-1999		
	A80	WO	01/33232		Andeen et al.	05-10-2001		
	A81	WO	01/33300		Navarro	05-10-2001		
	A82	WO	01/53889		Ling et al.	07-26-2001		
	A83	WO	01/63361		Heidari et al.	08-30-2001		
	A84	WO	01/69317		Montelius et al.	09-20-2001		
	A85	WO	01/79589		Hallberg	10-25-2001		
	A86	WO	01/79591		Hallberg et al.	10-25-2001		
	A87	WO	01/79592		Hallberg et al.	10-25-2001		
	A88	WO	01/79933		Heidari	10-25-2001		
	A89	WO	01/90816		Heidari	11-29-2001		



Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	09/905,718
				Filing Date	May 16, 2002
				First Named Inventor	Watts et al.
				Group Art Unit	1762
				Examiner Name	Bernard D. Pianalto
Sheet	4	of	9	Attorney Docket Number	PA27/UTS-26-03q12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
Bf	A90	STEWART, "A Platform with Six Degrees of Freedom," Proc. of Inst. Mech. Engrs., 1965, pp. 371-378, vol. 180 pt. 1, no. 15. (No month avail.)	f
	A91	PAROS et al., "How to Design Flexure Hinges," Machine Design, Nov. 25, 1965, pp. 151-156.	
	A92	RAIBERT et al., "Hybrid Position/Force Control of Manipulators," Transactions of the ASME, Journal of Dynamic Systems, Measurement and Control, June 1981, pp. 126-133, vol. 102.	
	A93	Gokan et al., "Dry Etch Resistance of Organic Materials," J. Electrochem. Soc. 130:1, 143-146 (Jan. 1983)	
	A94	LIN, "Multi-Layer Resist Systems", Introduction of Microlithography," American Chemical Society, 1983, pp. 287-350, IBM T.J. Watson Research Center, Yorktown Heights, New York 10598. (No month avail.)	
	A95	HOGAN, "Impedance Control: An Approach to Manipulation," Journal of Dynamic Systems, Measurement and Control, March 1985, pp. 1-7, vol. 107.	
	A96	COWIE, "Polymers: Chemistry and Physics of Modern Materials," 1991, pp. 408-409, 2 nd Ed, Chapman and Hall, a division of Routledge, Chapman and Hall, Inc., 29 West 35 th Street, NY, NY 10001-2291. (No month avail.)	
	A97	HOLLIS et al., "A Six-Degree-of-Freedom Magnetically Levitated Variable Compliance Fine Motion Wrist: Design, Modeling and Control," IEEE Transactions on Robotics and Automation, 1991, pp. 320-332, vol. 7, no. 3. (No month avail.)	
	A98	TOMITA et al., "A 6-Axes Motion Control Method for Parallel-Linkage-Type Fine Motion Stage," Journal of Japan Society of Precision Engineering, 1992, pp. 118-124. (No month avail.)	
	A99	SLOCUM, "Precision Machine Design: Macromachine Design Philosophy and its Applicability to the Design of Micromachines," Micro Electro Mechanical Systems, 1992, pp. 37-42. (No month avail.)	
↓	A100	KRUG et al., "Fine Patterning of Thin Sol-Gel Films," Journal of Non-Crystalline Solids, 1992, pp. 447-450, vol. 147 & 148. (No month avail.)	

Examiner Signature	Pianalto	Date Considered	7-29-04
--------------------	----------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 9

Complete if Known

Application Number	09/905,718
Filing Date	May 16, 2002
First Named Inventor	Watts et al.
Group Art Unit	1762
Examiner Name	Bernard D. Pianalto
Attorney Docket Number	PA27/UTS-26-03q12

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

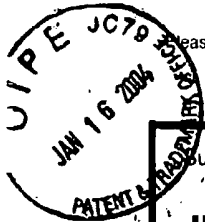
Examiner Initials*	Cita No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
Bl	A101	ARAI et al., "Calibration and Basic Motion of a Micro Hand Module," Proc. of IEEE, 1993, pp. 1660-1665. (no month avail.)	
	A102	PENG et al., "Compliant Motion Control of Kinematically Redundant Manipulators," IEEE Transactions on Robotics and Automation, December 1993, pp. 831-837, vol. 9, no. 6.	
	A103	RONG et al., "Design and Analysis of Flexure-Hinge Mechanism Used in Micro-Positioning Stages," ASME, PED. Vol. 68-2, Manufacturing Science and Engineering, 1994, pp. 979-985, vol. 2. (No month avail.)	
	A104	HASHIMOTO et al., "Design and Characteristics of Parallel Link Compliant Wrist," IEEE International Conference on Robotics and Automation, 1994, pp. 2457-2462. (no month avail.)	
	A105	MERLET, "Parallel Manipulators: State of the Art Perspectives," Advanced Robotics, 1994, pp. 589-596, vol. 8. (no month avail.)	
	A106	ANANTHASURESH et al., "Strategies for Systematic Synthesis of Compliant MEMS," ASME, DSC-vol. 55-2, Dynamic Systems and Control, 1994, pp. 677-686, vol. 2. (No month avail.)	
	A107	Kotachi et al., "Si-Containing Positive Resis for ArF Laser Lithography," J. PhotopolymerSci. Tech. 8(4) 615-622, 1995. (No month avail.)	
	A108	Krauss et al., "Fabrication of Nanodevices Using Sub-25nm Imprint Lithography," Appl. Phys. Lett 67(21), 3114-3116, 1995 (no month avail.)	
	A109	CHOU et al., "Imprint of Sub-25 nm Vias and Trenches in Polymers," Applied Physics Letters, November 20, 1995, pp. 3114-3116, vol. 67(21).	
	A110	ARAI et al., "Development of a New Parallel Manipulator with Fixed Linear Actuator," Proc. of Japan/USA Symposium on Flexible Automation, ASME, 1996, pp. 145-149, vol. 1. (No month avail.)	
	A111	CHOU et al., "Imprint Lithography with 25-Nanometer Resolution," Science, Apr. 5, 1996, pp. 85-87, vol. 272.	

Examiner Signature	Pianalto	Date Considered	7-29-04
--------------------	----------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231



Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	09/905,718
				Filing Date	May 16, 2002
				First Named Inventor	Watts et al.
				Group Art Unit	1762
				Examiner Name	Bernard D. Pianalto
				Attorney Docket Number	PA27/UTS-26-03q12
Sheet	6	of	9		

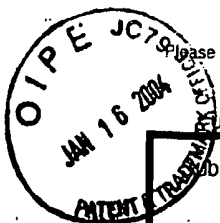
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
Bl ↓	A112	HOWELL et al., "Loop-Closure Theory for the Analysis and Synthesis of Compliant Mechanisms," Journal of Mechanical Design, March 1996, pp. 121-125, vol. 118.		
	A113	HAISMA et al., "Mold-Assisted Nanolithography: A Process for Reliable Pattern Replication," Journal of Vacuum Science and Technology, Nov/Dec 1996, pp. 4124-4128, vol. B 14(6).		
	A114	CHOU et al., "Imprint Lithography with Sub-10nm Feature Size and High Throughput," Microelectronic Engineering, 1997, pp. 237-240, vol. 35. (no match avail.)		
	A115	PERNETTE et al., "Design of Parallel Robots in Microrobotics," Robotica, July-August 1997, pp. 417-420, vol. 15, no. 4.		
	A116	RONG et al., "Dynamics of Parallel Mechanism with Direct Compliance Control," IEEE, 1997, pp. 1753-1758. (no match avail.)		
	A117	MITTAL et al., "Precision Motion Control of Magnetic Suspension Actuator Using a Robust Nonlinear Compensation Scheme," IEEE/ASME Transactions on Mechatronics, Dec. 1997, pp. 268-280, vol. 2, no. 4.		
	A118	Physik Instrumente, Product Catalog for Micropositioning from www.physikinstrumente.com, 1997. (no match avail.)		
	A119	WILLIAMS et al., "Six Degree of Freedom Mag-Lev Stage Development," SPIE, 1997, pp. 856-867, vol. 3051. (no match avail.)		
	A120	LEE et al., "An Ultraprecision Stage for Alignment of Wafers in Advanced Microlithography," Precision Engineering, 1997, pp. 113-122, vol. 21, Elsevier Science Inc., 655 Avenue of the Americas, NY, NY 10010. (no match avail.)		
	A121	KANETOMO et al., "Robot for Use in Ultrahigh Vacuum," Solid State Tech., August 1997, pp. 63-64, 69-72.		
	A122	GOLDFARB et al., "Compliant Micromanipulator Design for Scaled Bilateral Telemanipulation of Small-Scale Environments," Proc. of the ASME, Dynamic Systems and Control Div., 1998, pp. 213-218, vol. 64. (no match avail.)		

Examiner Signature	Pianalto	Date Considered	7-29-04
--------------------	----------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	09/905,718		
		Filing Date	May 16, 2002		
		First Named Inventor	Watts et al.		
		Group Art Unit	1762		
		Examiner Name	Bernard D. Pianalto		
Sheet	7	of	9	Attorney Docket Number	PA27/UTS-26-03q12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

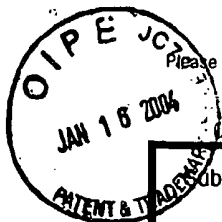
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
BP	A123	KOSEKI et al., "Design and Accuracy Evaluation of High-Speed and High-Precision Parallel Mechanism," Proc. of the 1998 IEEE, Intl. Conf. on Robotics & Automation, May 1998, pp. 1340-1345, Leuven, Belgium.	
	A124	KIM et al., "High Precision Magnetic Levitation Stage for Photolithography," Precision Engineering, 1998, pp. 66-77, vol. 22, Elsevier Science Inc., 655 Avenue of the Americas, NY, NY 10010. (No month avail.)	
	A125	MANSKY et al., "Large-Area Domain Alignment in Block Copolymer Thin Films Using Electric Fields," Macromolecules, 1998, pp. 4399-4401, vol. 31. (No month avail.)	
	A126	WANG et al., "Passive Compliance Versus Active Compliance in Robot-Based Automated Assembly Systems," Industrial Robot, 1998, pp. 48-57, vol. 25, no. 1, MCB University Press. (No month avail.)	
	A127	SCHEER et al., "Problems of the Nanoimprinting Technique for Nanometer Scale Pattern Definition," Journal of Vacuum Science and Technology, Nov/Dec 1998, pp. 3917-3921, vol. B 16(6).	
	A128	XIA et al., "Soft Lithography," Annu. Rev. Mater. Sci., 1998, pp. 153-184, vol. 28. (No month avail.)	
	A129	XIA et al., "Soft Lithography," Agnew. Chem. Int. Ed., 1998, pp. 550-575, vol. 37. (No month avail.)	
	A130	TAJBAKSHI et al., "Three-Degree-of-Freedom Optic Mount for Extreme Ultraviolet Lithography," ASPE, 1998, pp. 359-362, vol. 18. (No month avail.)	
	A131	LEE et al., "Ultra Precision Positioning System for Servo Motor-Piezo Actuator Using the Dual Servo Loop and Digital Filter Implementation," ASPE, 1998, pp. 287-290, vol. 18. (No month avail.)	
	A132	WU et al., "Large Area High Density Quantized Magnetic Disks Fabricated Using Nanoimprint Lithography," Journal of Vacuum Science and Technology, Nov/Dec 1998, pp. 3825-3829, vol. B 16(6).	
	A133	OHYA et al., "Development of 3-DOF Finger Module for Micro Manipulation," Proc. of the 1999 IEEE/RSJ, Intl. Conf. on Intelligent Robots and Systems, 1999, pp. 894-899. (No month avail.)	

Examiner Signature	Pianalto	Date Considered	7-29-04
--------------------	----------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231



Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0551-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	09/905,718
				Filing Date	May 16, 2002
				First Named Inventor	Watts et al.
				Group Art Unit	1762
				Examiner Name	Bernard D. Pianalto
				Attorney Docket Number	PA27/UTS-26-03q12
Sheet	8	of	9		

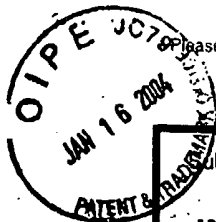
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²	
BP	A134	TANIKAWA et al., "Development of Small-Sized 3 DOF Finger Moldule in Micro Hand for Micro Manipulation," Proc. of the IEEE/RSJ, Intl. Conf. on Intelligent Robots and Systems, 1999, pp. 876-881. (no month avail.)		
	A135	COLBURN. et al., "Step and Flash Imprint Lithography: A New Approach to High-Resolution Patterning", Proc. of SPIE, 1999, pp. 379-389, vol. 3676. (no month avail.)		
	A136	Lucas Aerospace, Free-Flex Pivot Catalog, 1999. (no month avail.)		
	A137	GOLDFARB et al., "A Well-Behaved Revolute Flexure Joint for Compliant Mechanism Design," Journal of Mech. Design, Sept. 1999, pp. 424-429, vol. 121.		
	A138	Geodetic Technology, G1000-PC Power Series Specifications, 1999, from www.hexapods.com. (no month avail.)		
	A139	Hexel Corporation, Tornado 2000 System Specifications, 1999, from www.Hexel.com. (no month avail.)		
	A140	Physik Instruments, PI Online-Catalog, 1999, from www. Physikinstrument.com. (no month avail.)		
	A141	CHOU et al., "Lithographically-Induced Self Assembly of Periodic Polymer Micropillar Arrays," Journal of Vacuum Science and Technology, Nov/Dec 1999, pp. 3197-3202, vol. B 17(6).		
	A142	RUCHHOEFT et al., "Patterning Curved Surfaces: Template Generation by Ion Beam Proximity Lithography and Relief Transfer by Step and Flash Imprint Lithography," Journal of Vacuum Science and Technology, 1999, pp. 2965-2982, vol. 17. (no month avail.)		
	A143	Vanderbilt University Office of Transfer Technology, VU 9730 Specifications for Improved Flexure Device; 2001, from www.vanderbilt.com. (no month avail.)		
	A144	STIX, "Getting More from Moore's," Scientific American, 2001, from www.scientificamerican.com. (no month avail.)		

Examiner Signature	<i>B. Pianalto</i>	Date Considered	7-29-04
--------------------	--------------------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

9

of

9

Complete if Known

Application Number	09/905,718
Filing Date	May 16, 2002
First Named Inventor	Watts et al.
Group Art Unit	1762
Examiner Name	Bernard D. Pianalto
Attorney Docket Number	PA27/UTS-26-03q12

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
[Handwritten initials]	A145	CHOI et al., "High Precision Orientation Alignment and Gap Control Stages for Imprint Lithography Processes," U.S. Patent Application 09/698,317, Filed with USPTO on October 27, 2000.	[Handwritten mark]
	A146	SREENIVASAN et al., "High-Resolution Overlay Alignment Methods and Systems for Imprint Lithography," U.S. Patent Application 09/907,512, Filed with USPTO on July 16, 2001.	
	A147	CHOI et al., "Method and System of Automatic Fluid Dispensing for Imprint Lithography Processes," U.S. Patent Application 09/908,455, Filed with USPTO on July 17, 2001	
	A148	WILLSON et al., "Step and Flash Imprint Lithography," U.S. Patent Application 09/908, 765, Filed with USPTO on July 19, 2001.	
	A149	CHOI et al., "Methods for High-Precision Gap and Orientation Sensing Between a Transparent Template and Substrate for Imprint Lithography," U.S. Patent Application 09/920,341, Filed with USPTO on August 1, 2001.	
	A150	Nguyen, A. Q., "Asymmetric Fluid-Structure Dynamics in Nanoscale Imprint Lithography," University of Texas at Austin, August 2001.	
	A151	CHOI et al., "Flexure Based Macro Motion Translation Stage," U.S. Patent Application 09/934,248, Filed with USPTO on Auguts 21, 2001.	
	A152	BAILEY et al., "Template for Room Temperature Low Pressure Micro- and Nano-Imprint Lithography," U.S. Patent Application 09/976,681, Filed with USPTO on October 12, 2001.	
A153	WATTS et al., "Low Viscosity High Resolution Patterning Material," U.S. Patent Application 10/178,947, Filed with USPTO on June 24, 2002.		

Examiner
Signature

[Handwritten Signature: Pianalto]

Date

Considered

7-29-04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031